IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Ozawa

Appl. No.: 10/091,646

Conf. No.: 9145

Filed: March 5, 2002

Title: OPTICAL FUSION SPLICER AND METHOD FOR ESTIMATING A SHAPE

OF BEAM DISCHARGED BY OPTICAL FIBER FUSION SPLICER

Art Unit: 2879

Examiner: Dalei Dong Docket No.: 113197-025

Mail Stop Petitions

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

REQUEST TO WITHDRAW HOLDING OF ABANDONMENT

REMARKS

Applicants are submitting herewith a Petition to Withdraw Holding of Abandonment pursuant to 37 C.F.R. § 1.181. In the present case, a Notice of Allowance issued with DATE MAILED: 09/20/2006 as indicated on the attached copy of the Notice of Allowance as Exhibit A. However, the Notice of Allowance was returned to the U.S. Patent Office by the U.S. Postal Office as undelivered and received by the Patent Office on October 27, 2006. The receipt of the undelivered Notice of Allowance is evidenced by the USPTO PAIR Database for this case. A copy of the PAIR database printout along with a copy of the undelivered Notice of Allowance as received by the U.S. Patent Office is attached herewith as Exhibit B.

Applicants' respectfully submit herewith that their first notification of the issuance of the Notice of Allowance was on January 3, 2007. In this regard, Applicants through their undersigned attorney of record retrieved a copy of the issued Notice of Allowance from the USPTO PAIR Database based on a status check conducted pursuant to internal docketing procedures of Applicants' undersigned attorney of record. The retrieved Notice of Allowance is attached as Exhibit A. Applicants are submitting herewith as Exhibit C a copy of the docket record associated with this case evidencing same.

Accordingly, Applicants respectfully submit that the Notice of Allowance was not received by Applicants and Applicants attorney of record prior to the date that the issue fee was due (i.e., December 20, 2006). As previously discussed, Applicants through their attorney of record were first notified of the Notice of Allowance after the issue fee was due (e.g., January 3, 2007) based on the retrieval of the Notice of Allowance from USPTO's PAIR Database subsequent to a status review of this case according to internal docketing procedures conducted in the regular course of business. Therefore, Applicants respectfully request that this petition be granted, and thus, the holding of abandonment be withdrawn. In view of same, Applicants respectfully request that the Patent Office issue the Notice of Allowance again, thus providing Applicants with three months from the date of issuance for payment of the issue fee.

Appl. No. 10/091,646

If the Patent Office should have any questions regarding Applicants' Petition, Applicants respectfully request that the Patent Office contact the undersigned attorney of record, and, if convenient, by telephone to resolve any potential issues that may remain.

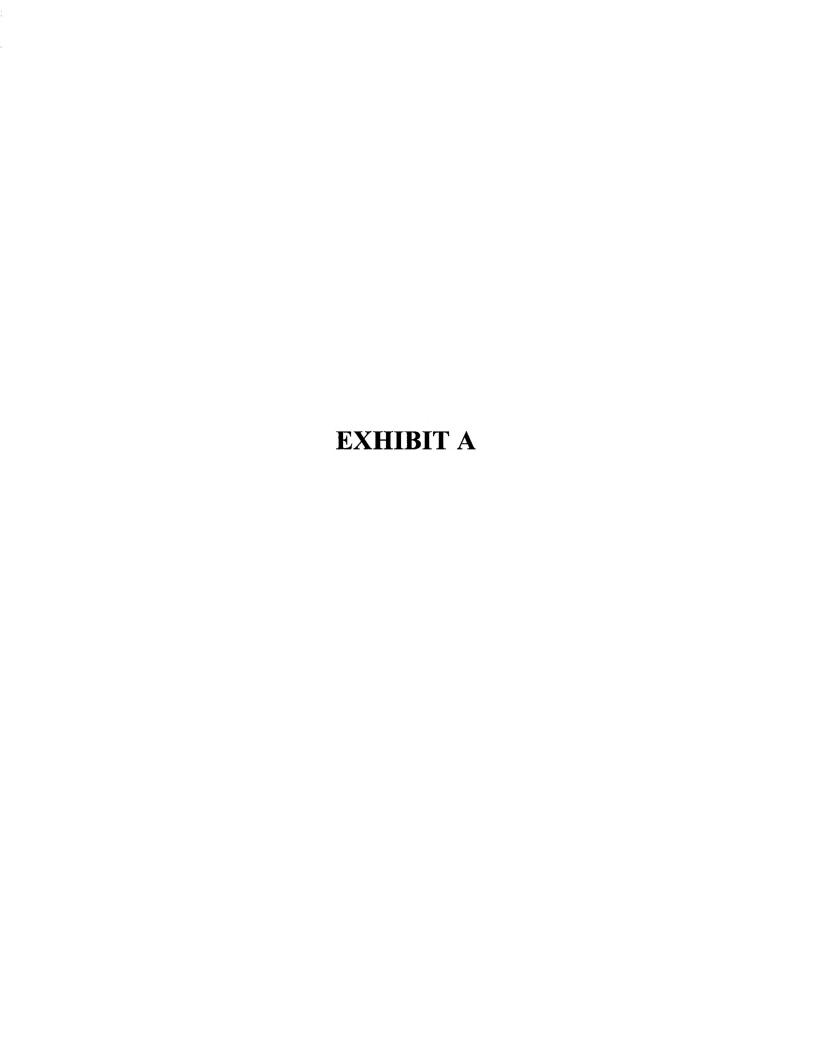
Respectfully submitted,

BELL, BOYD & LLOYD LLP

BY

Thomas C. Basso Reg. No. 46,541 Customer No. 24573

Dated: January 19, 2007



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

24573

BELL, BOYD & LLOYD, LLC

09/20/2006

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BELL, BOYD & LLOYD INTELLECTUAL PROPERTY DOCKET

PO BOX 1135 CHICAGO, IL 60690-1135

JAN 0 3 2007

EXAMINER

DONG, DALEI

ART UNIT

PAPER NUMBER

DATE MAILED: 09/20/2006

ATTY: TZB .62 DOCKET:

FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. APPLICATION NO. FILING DATE 03/05/2002 Koji Ozawa 113197-025 10/091,646

TITLE OF INVENTION: OPTICAL FIBER FUSION SPLICER AND METHOD FOR ESTIMATING A SHAPE OF BEAM DISCHARGED BY THE

OPTICAL FIBER FUSION SPLICER

APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	S0	\$1700	12/20/2006

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

1. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown
- B. If the status above is to be removed, check box 5b on Part B -Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.
- II. PART B FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as

indicated unless corrected maintenance fee notificati	f below or directed oth ons.	erwise in Block 1, by (a					rate "FEE ADDRESS" for
CURRENT CORRESPONDE	NCE ADDRESS (Note: Use Blo	ock 1 for any change of address)		Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.			
24573	7590 09/20/	2006		Co	etificato o	f Mailing or Trans	mission
BELL, BOYD & PO BOX 1135 CHICAGO, IL 60	& LLOYD, LLC 0690-1135		S a u	hereby certify that il tates Postal Service y ddressed to the Mai ansmitted to the USF	nis Fee(s) with suffic 1 Stop IS TO (571)	Transmittal is being ient postage for firs SUE FEE address 273-2885, on the d	g deposited with the United st class mail in an envelope above, or being facsimile ate indicated below.
			Γ				(Depositor's name)
							(Signature)
						-	(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENT	OR	ATTORN	NEY DOCKET NO.	CONFIRMATION NO.
10/091,646	03/05/2002		Koji Ozawa		1	13197-025	9145
TITLE OF INVENTION OPTICAL FIBER FUSIO		ISION SPLICER AND	METHOD FOR ESTI	MATING A SHAPE	OF BEA	M DISCHARGED	BY THE
APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DL	PREV. PAID ISSU	HE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$0		S1700	12/20/2006
EXAMI	NER	ART UNIT	CLASS-SUBCLASS				
DONG, I	DAI.EI	2879	385-096000				
"Fee Address" indi PTO/SB/47; Rev 03-0. Number is required.	ondence address (or Cha #122) attached. cation (or "Fee Address" 2 or more recent) attach	nge of Correspondence Indication form ed. Use of a Customer	(1) the names of up or agents OR, altern (2) the name of a si registered attorney 2 registered patent i listed, no name will THE PATENT (print or	ngle firm (having as or agent) and the nar utomeys or agents. If be printed.	nt attorned a member nes of up I no name	a 2to is 3	
PLEASE NOTE: Unb recordation as set forth (A) NAME OF ASSIC	ess an assignee is ident i in 37 CFR 3.11. Comp INFE	ified below, no assignee oletion of this form is NO	data will appear on th T a substitute for filing (B) RESIDENCE: (C	e patent. If an assig an assignment. TY and STATE OR	COUNTR	Υ)	oup entity Government
	re submitted: o small entity discount p	permitted)	b. Payment of Fee(s): (I A check is enclose Payment by credit The Director is her overpayment, to D	d. card. Form PTO-203	8 is attacl	ned. onired fee(s), any d	shown above) efficiency, or credit any an extra copy of this form).
5. Change in Entity Stat	SMALL ENTITY state	is See 37 CFR 1.27.	☐ b. Applicant is no	tonger claiming SM/	ALL ENTI	TY status. See 37 C	FR 1.27(g)(2).
NOTE: The Issue Fee and interest as shown by the r	d Publication Fee (if req records of the United Sta	uired) will not be accepte ites Patent and Trademark	d from anyone other the Office.	an the applicant; a reg	gistered at	tomey or agent; or t	he assignee or other party in
Authorized Signature				Date			
Typed or printed name	·						
This collection of inform an application. Confident submitting the complete this form and/or suggesti Box 1450. Alexandria, V Alexandria, Virginia 223 Under the Paperwork Rec							nd by the USPTO to processing gathering, preparing, and ime you require to complete partment of Commerce, P.O. for Patents, P.O. Box 1450. of number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspro.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,646	03/05/2002	Koji Ozawa	113197-025	9145
21571	7590 09/20/2006		EXAMINER	
24573 RELL ROVID	& LLOYD, LLC	DONG.	DONG, DALEI	
PO BOX 1135	& LLOTD, LLC		ART UNIT	PAPER NUMBER
CHICAGO, IL 6	60690-1135		2879	
			DATE MAILED: 09/20/200	6

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 241 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 241 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

·	Application No.	Applicant(s)							
	10/091,646	OZAWA ET AL.							
Notice of Allowability	Examiner	Art Unit							
	Dalei Dong	2879							
All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	The MAILING DATE of this communication appears on the cover sheet with the correspondence address Il claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included erewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS OTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. This communication is responsive to Response filed on July 6, 2006.								
 This communication is responsive to <u>Response filed on Juli</u> 	<u>ly 6, 2006</u> .								
2. X The allowed claim(s) is/are 4 and 5.									
 Acknowledgment is made of a claim for foreign priority ur a) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)). 	been received. been received in Application No								
* Certified copies not received:									
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.									
 A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give 	itted. Note the attached EXAMINER' es reason(s) why the oath or declara	S AMENDMENT or NOTICE OF tion is deficient.							
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.								
(a) including changes required by the Notice of Draftspers		948) attached							
1) 🗌 hereto or 2) 🔲 to Paper No./Mail Date									
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date									
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t	.84(c)) should be written on the drawir he header according to 37 CFR 1.121(d	d).							
 DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT 	sit of BIOLOGICAL MATERIAL n FOR THE DEPOSIT OF BIOLOGICA	nust be submitted. Note the AL MATERIAL.							
Attachment(s) 1. Notice of References Cited (PTO-892)	5. T Notice of Informal P	atent Application (PTO-152)							
2. Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ☐ Interview Summary								
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/0	Paper No./Mail Dat	te							
Paper No./Mail Date		ent of Reasons for Allowance							
4. Examiner's Comment Regarding Requirement for Deposit of Biological Material	9. ☐ Other								

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DETAILED ACTION

1. The Response filed on July 6, 2006, has been entered and acknowledged by the Examiner.

Election/Restrictions

2. This application is in condition for allowance except for the presence of claim 3 directed to a discharge beam estimating method, for an optical fusion splicer non-elected without traverse. Accordingly, claim 3 has been cancelled.

EXAMINER'S AMENDMENT

3. The application has been amended as follows:

Claim 4 (Currently Amended). A method for fusion splicing of an optical fiber using an optical fiber fusion splicer comprising a setting means for setting respective end surfaces of two optical fibers that are to be spliced in order to abut against each other, a heating means for generating an arc discharge between two discharge electrodes and heating an abutment portion of said optical fibers using a discharge beam, and an image pickup means for picking up an image of said discharge beam, the method comprising: measuring, from image signals obtained by said image pickup means when a preliminary arc discharge is generated between said discharge electrodes when no optical fibers have been placed in a discharge area, brightness distributions on a plurality of lines that are set at different positions along a rectilinear direction between said discharge electrodes and run in a direction substantially at right angles to the rectilinear direction; estimating a

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heating center of the arc discharge along an axial direction of the optical fiber from the plurality of brightness distributions; controlling a position of said setting means along the axial direction of the optional optical fiber such that the abutment portion of said two optical fibers is positioned in the estimated heating center; and thereafter controlling said heating means such that a main arc discharge is generated and said abutment portion is heated by said discharge beam.

Allowable Subject Matter

- 4. Claims 4 and 5 are allowed.
- 5. The following is an examiner's statement of reasons for allowance:

Regarding to independent claim 4, prior art of record taken alone or in combination fails to teach or suggest a method for fusion splicing of an optical fiber using an optical fiber fusion splicer comprising: estimating a heat center of the arc discharge along an axial direction of the optical fiber from the plurality of brightness distributions; controlling a position of the setting means along the axial direction of the optical fiber such that the abutment portion of the two optical fibers is positioned in the estimated heating center, in combination with other claimed method of the present claimed invention.

Regarding to claim 5, is allowable because of the dependency upon the allowable independent claim 4.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

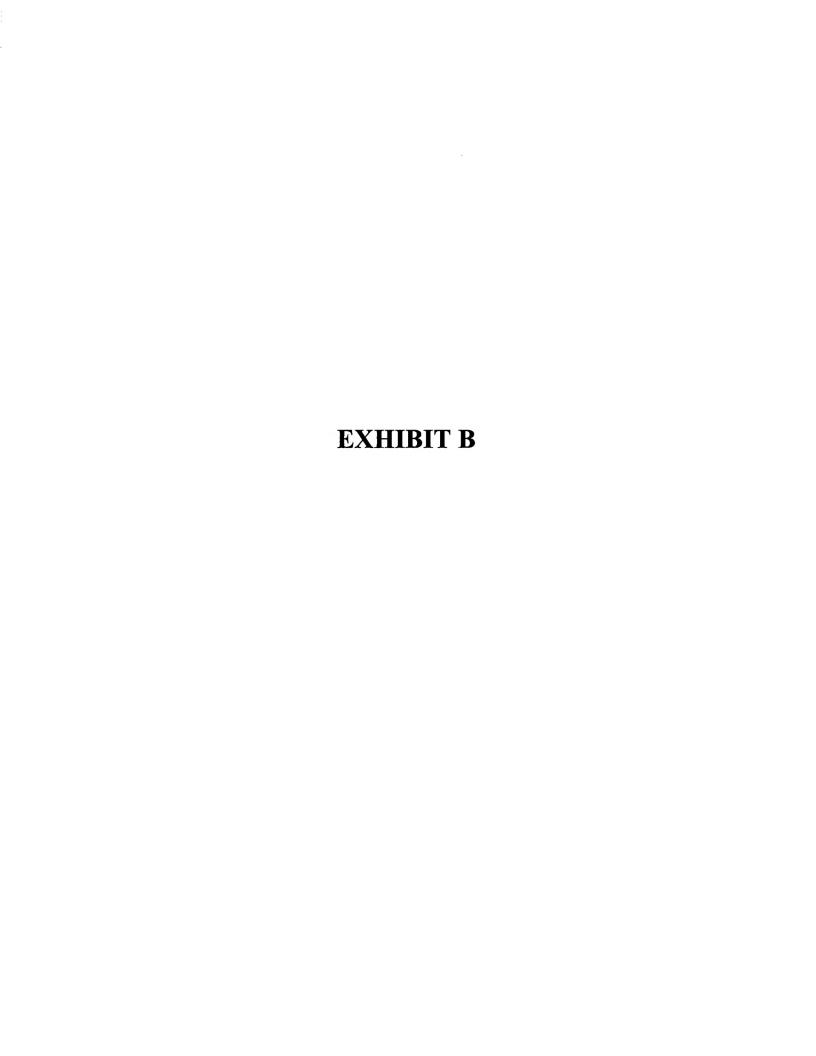
Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.D.

August 22, 2006

Kgularay Karabi Guharay Primary Examiner Art Unit 2879 8/34/06



OPTICAL FIBER FUSION SPLICER AND METHOD FOR ESTIMATING A SHAPE OF BEAM DISCHARGED BY THE OPTICAL FIBER FUSION SPLICER 10/091,646



This application is officially maintained in electronic form. To View: Click the desired Document Description. To Download and Print: Check the desired document(s) and click StartDownload.

Mail Room Date	Document Description	Page Count	Select All Start Download Clear All
11-01-2006	List of References cited by applicant and considered by examiner	1	Г.
10-27-2006	Mail returned to USPTO as undelivered	9	▽
09-20-2006	Notice of Allowance and Fees Due (PTOL-85)	3	I.
09-20-2006	Notice of Allowance and Fees Due (PTOL-85)	5	Г
09-20-2006	Issue Information including classification, examiner, name, claim, renumbering, etc.	1	Г
09-20-2006	Search information including classification, databases and other search related notes	1	П
09-20-2006	Index of Claims	1	Γ
09-20-2006	Bibliographic Data Sheet	1	Г
08-22-2006	Examiner's search strategy and results	4	Г
07-06-2006	Amendment - After Non- Final Rejection	1	۲
07-06-2006	Applicant Arguments/Remarks Made in an Amendment	5	Г
07-06-2006	Extension of Time	1	Γ
07-06-2006	Fee Worksheet (PTO-06)	2	Γ
07-06-2006	Status Letter Mailed to Applicant	2	Γ
03-06-2006	Non-Final Rejection	7	Γ
03-06-2006	Search information including classification, databases and other search related notes	1	Γ

03-06-2006	Index of Claims	1	Γ
12-19-2005	Fee Worksheet (PTO-06)	1	Г
12-19-2005	Claims Worksheet (PTO- 2022)	1	<u> </u>
12-19-2005	Amendment Submitted/Entered with Filing of CPA/RCE	1	٢
12-19-2005	Claims	2	Γ.
12-19-2005	Applicant Arguments/Remarks Made in an Amendment	3	<u> </u>
12-19-2005	Request for Continued Examination (RCE)	1	Γ.
12-19-2005	Transmittal to TC	1	<u> </u>
09-16-2005	Final Rejection	8	Γ
09-16-2005	Index of Claims	1	Г
09-16-2005	Search information including classification, databases and other search related notes	1	Г
08-10-2005	Amendment - After Non- Final Rejection	4	Γ
08-10-2005	Applicant Arguments/Remarks Made in an Amendment	3	Γ
08-10-2005	Amendment - After Non- Final Rejection	4	Γ
08-10-2005	Applicant Arguments/Remarks Made in an Amendment	3	
05-11-2005	Non-Final Rejection	7	T ₂₋₇
05-11-2005	List of references cited by examiner	1	ŗ
05-11-2005	Index of Claims	1	Г
05-11-2005	Search information including classification, databases and other search related notes	1	Г
03-24-2005	Amendment After Final or under 37CFR 1.312, initialed by the examiner.	1	Γ
03-24-2005	Request for Continued	1	Γ

	Examination (RCE)		
03-24-2005	Extension of Time	1	Γ
03-08-2005	Advisory Action (PTOL-303)	3	П
03-08-2005	Amendment After Final or under 37CFR 1.312, initialed by the examiner.	1	Γ
02-24-2005	Fee Worksheet (PTO-06)	1	Γ
02-24-2005	Claims Worksheet (PTO- 2022)	1	Г
02-24-2005	Amendment Submitted/Entered with Filing of CPA/RCE	2	Γ
02-24-2005	Claims	2	Γ
02-24-2005	<u>Applicant</u> Arguments/Remarks Made in an Amendment	2	Ī.
11-19-2004	Final Rejection	7	
11-19-2004	Index of Claims	1	Γ
10-18-2004	Amendment - After Non- Final Rejection	2	Г
10-18-2004	Authorization for Extension of Time all replies	2	Γ
10-18-2004	Applicant Arguments/Remarks Made in an Amendment	2	Г
07-13-2004	Non-Final Rejection	5	Γ
07-13-2004	<u>List of references cited by examiner</u>	1	Γ
07-13-2004	List of References cited by applicant and considered by examiner	1	Г
07-13-2004	Index of Claims	1	Ŀ
07-13-2004	Search information including classification, databases and other search related notes	1	
07-02-2004	Information Disclosure Statement (IDS) Filed	6	Γ
07-02-2004	Foreign Reference	6	Γ
07-02-2004	Foreign Reference	13	Г

05-24-2004	Response to Election / Restriction Filed	2	Ŀ
04-20-2004	Requirement for Restriction/Election	5	Г
04-20-2004	Index of Claims	1	F
03-05-2002	Transmittal of New Application	5	П
03-05-2002	Drawings	3	
03-05-2002	Specification	15	.
03-05-2002	Claims	2	Г
03-05-2002	Abstract	1	Γ
03-05-2002	Oath or Declaration filed	3	Γ
03-05-2002	Fee Worksheet (PTO-06)	1	Γ
03-05-2002	Fee Worksheet (PTO-06)	1	Г
03-05-2002	Claims Worksheet (PTO- 2022)	1	Γ
03-05-2002	Information Disclosure Statement (IDS) Filed	2	Γ
03-05-2002	Foreign Reference	7	Γ.
03-05-2002	Foreign Reference	4	Γ.
03-05-2002	<u>Certified Copy of Foreign</u> <u>Priority Application</u>	21	Г.:
03-05-2002	<u>Transmittal of New</u> <u>Application</u>	5	Г
03-05-2002	Specification	15	Γ
03-05-2002	Claims	2	Γ
03-05-2002	Abstract	1	ŗ
03-05-2002	Drawings	3	Γ
03-05-2002	Oath or Declaration filed	3	Γ
03-05-2002	Miscellaneous Incoming Letter	1	Γ



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

24573 7590

09/20/2006

BELL, BOYD & LLOYD, LLC PO BOX 1135 CHICAGO, IL 60690-1135

EXAMINER		
DONG	G. DALEI	
ART UNIT	PAPER NUMBER	
2879		

DATE MAILED: 09/20/2006

APPLICATION NO.	FILING DATE	FIRS' NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/091,646	03/05/2002	Koji Ozawa	113197-025	9145	

TITLE OF INVENTION: OPTICAL FIBER FUSION SPLICER AND METHOD FOR ESTIMATING A SHAPE OF BEAM DISCHARGED BY THE OPTICAL FIBER FUSION SPLICER

APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	\ <u>`</u> 0	\$1400	\$300	S0	\$1700	12/20/2006

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HOW TO REPLY TO THIS NOTICE:

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If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TÖTAL FEE(S) DUE shown above.
- B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.
- II. PART B FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

Complete and send this form, together with applicable fee(s), to: Mail Stop ISSUE FEE
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or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as

maintenance fee notificat	d below or directed oth ions. NCE ADDRESS (Note: Use Blo					arate "FEE ADDRESS" for or domestic mailings of the for any other accompanying
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			<u> </u>			(Depositor's name)
						(Signature)
						(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,646	03/05/2002		Koji Ozawa	L	113197-025	9145
TITLE OF INVENTION OPTICAL FIBER FUSIO		SION SPLICER AND	METHOD FOR ESTIMA	ATING A SHAPE C	OF BEAM DISCHARGED	BY THE
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DONG, I	DALEI	2879	385-096000			
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5. Change in Entity Stat	SMALL ENTITY statu	s. See 37 CFR 1.27.	h. Applicant is no lor	ger claiming SMAL	L ENTITY status. See 37 C	FR 1.27(g)(2).
NOTE: The Issue Fee and interest as shown by the r	l Publication Fee (if requeereds of the United State	iired) will not be accepte es Patent and Trademark	d from anyone other than Office.	the applicant; a regis	tered attorney or agent; or t	he assignee or other party in
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APPLICATION NO. FILING DATE		ING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO. CONFIRMATION N			
10/091.646	0.	3/05/2002	Koji Ozawa	113197-025	9145		
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BELL, BOYD & LLOYD, LLC				DONG, DALEI			
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CHICAGO, IL 6	60690-1135	5		2879			
				DATE MAILED: 09/20/200	6		

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 241 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 241 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

	Application No.	Applicant(s)
	10/091,646	OZAWA ET AL.
Notice of Allowability	Examiner	Art Unit
·	Dalei Dong	2879
The MAILING DATE of this communication appear All claims being allowable, PROSECUTION ON THE MERITS IS (herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RICO of the Office or upon petition by the applicant. See 37 CFR 1.313	or other appropriate communication GHTS. This application is subject t and MPEP 1308.	will be mailed in due course. THIS
1. \boxtimes This communication is responsive to <u>Response filed on Juli</u>	<u>y 6, 2000</u> .	
2. The allowed claim(s) is/are 4 and 5.		
3. ☑ Acknowledgment is made of a claim for foreign priority un a) ☑ All b) ☐ Some* c) ☐ None of the:		
 Certified copies of the priority documents have Certified copies of the priority documents have 	been received in Application No.	<u> </u>
Copies of the certified copies of the priority documents have 3. □ Copies of the certified copies of the priority documents have	cuments have been received in this	national stage application from the
International Bureau (PCT Rule 17.2(a)).		
* Certified copies not received:		
Applicant has THREE MONTHS FROM THE "MAILING DATE" of noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be submit	ENT of this application.	
INFORMAL PATENT APPLICATION (PTO-152) Which give	es reason(s) why the dath of dedah	ation is deficient.
5. CORRECTED DRAWINGS (as "replacement sheets") mus	t be submitted.	(049) attached
(a) ☐ including changes required by the Notice of Draftspers	on's Patent Drawing Review (PTO	-946) attached
1) hereto or 2) to Paper No./Mail Date	- Amandment / Comment or in the	Office action of
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date		
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t	the fleatier according to a continue	1-7-
DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT	sit of BIOLOGICAL MATERIAL	must be submitted. Note the
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Attachment(s) 1. Notice of References Cited (PTO-892)	5. Notice of Informal	Patent Application (PTO-152)
2. Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ☐ Interview Summar Paper No./Mail D	y (PTO-413), ate
3. Information Disclosure Statements (PTO-1449 or PTO/SB/0	<u> </u>	dment/Comment
Paper No./Mail Date 4. Examiner's Comment Regarding Requirement for Deposit		nent of Reasons for Allowance
of Biological Material	9. 🔲 Other	

Art Unit: 2879

DETAILED ACTION

1. The Response filed on July 6, 2006, has been entered and acknowledged by the Examiner.

Election/Restrictions

2. This application is in condition for allowance except for the presence of claim 3 directed to a discharge beam estimating method, for an optical fusion splicer non-elected without traverse. Accordingly, claim 3 has been cancelled.

EXAMINER'S AMENDMENT

3. The application has been amended as follows:

Claim 4 (Currently Amended). A method for fusion splicing of an optical fiber using an optical fiber fusion splicer comprising a setting means for setting respective end surfaces of two optical fibers that are to be spliced in order to abut against each other, a heating means for generating an arc discharge between two discharge electrodes and heating an abutment portion of said optical fibers using a discharge beam, and an image pickup means for picking up an image of said discharge beam, the method comprising: measuring, from image signals obtained by said image pickup means when a preliminary arc discharge is generated between said discharge electrodes when no optical fibers have been placed in a discharge area, brightness distributions on a plurality of lines that are set at different positions along a rectilinear direction between said discharge electrodes and run in a direction substantially at right angles to the rectilinear direction; estimating a

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Application/Control Number: 10/091,646

Art Unit: 2879

heating center of the arc discharge along an axial direction of the optical fiber from the plurality of brightness distributions; controlling a position of said setting means along the axial direction of the optical optical fiber such that the abutment portion of said two optical fibers is positioned in the estimated heating center; and thereafter controlling said heating means such that a main arc discharge is generated and said abutment portion is heated by said discharge beam.

Allowable Subject Matter

- 4. Claims 4 and 5 are allowed.
- 5. The following is an examiner's statement of reasons for allowance:

Regarding to independent claim 4, prior art of record taken alone or in combination fails to teach or suggest a method for fusion splicing of an optical fiber using an optical fiber fusion splicer comprising: estimating a heat center of the arc discharge along an axial direction of the optical fiber from the plurality of brightness distributions; controlling a position of the setting means along the axial direction of the optical fiber such that the abutment portion of the two optical fibers is positioned in the estimated heating center, in combination with other claimed method of the present claimed invention.

Regarding to claim 5, is allowable because of the dependency upon the allowable independent claim 4.

Art Unit: 2879

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Page 5

Application/Control Number: 10/091,646

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.D.

August 22, 2006

Kgularay Karabi Guharay Primary Examiner Art Unit 2879

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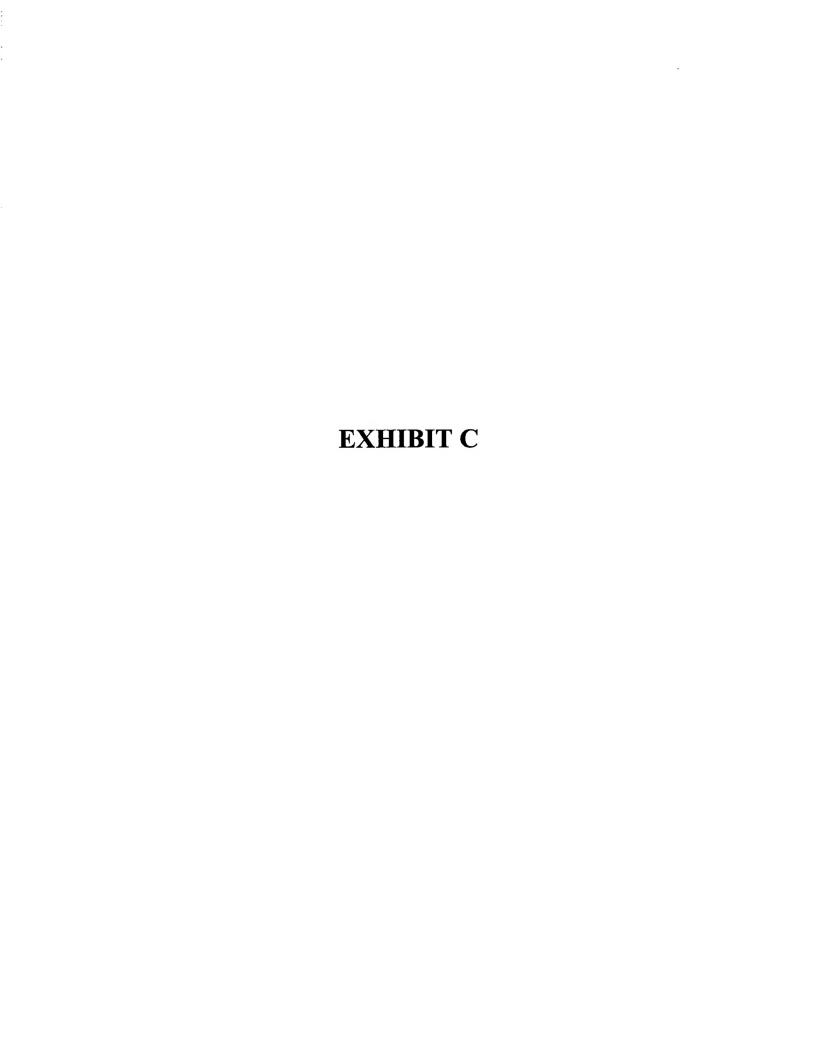


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COUNTRY	US UNITED STATES				TITLE					PRIOR	6/27/2001	
NEW/CON	CEQ	SERIAL#	10/091,646		OPTICAL FIBER FUSION SPLICER AND METHOD MAIL 3/5/2002							
RELATED	113197-025JP	PATENT#			FOR ESTIMATING A SHAPE OF BEAM DISCHARGED BY THE OPTICAL FIBER FUSION FILE 3/5/2002							
TYPE	UTL	STATUS	PUBLISHED		SPLICER PUBL 1/2/200					1/2/2003		
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istinv	Ozawa, et al.		CLAIMS			EXAMINER	Dong, Dalie	
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